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Incidence, diagnosis and survival

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MALIGNANT MESOTHELIOMA IN MALES IN NORTHERN JUTLAND, DENMARK

- INCIDENCE, DIAGNOSIS AND SURVIVAL

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BACKGROUND

Malignant mesothelioma (MM) is an aggressive neoplasm. It most commonly affects the pleura (PM), but other possible locations are the peritoneum, the pericardium and the tunica vaginalis testis.^{1,2} The 5-year survival rate in Northern Jutland is 6% for men (2010-2014).³ Incidence of PM has been significantly higher in the North Denmark Region (age-adjusted incidence (W) among males 2,7/100.000) compared to the national average of (1,7/100.000) because of increased asbestos exposure due to the location of the Danish Eternit Factory A/S in Aalborg and two large shipyards in Aalborg and Frederikshavn.⁴

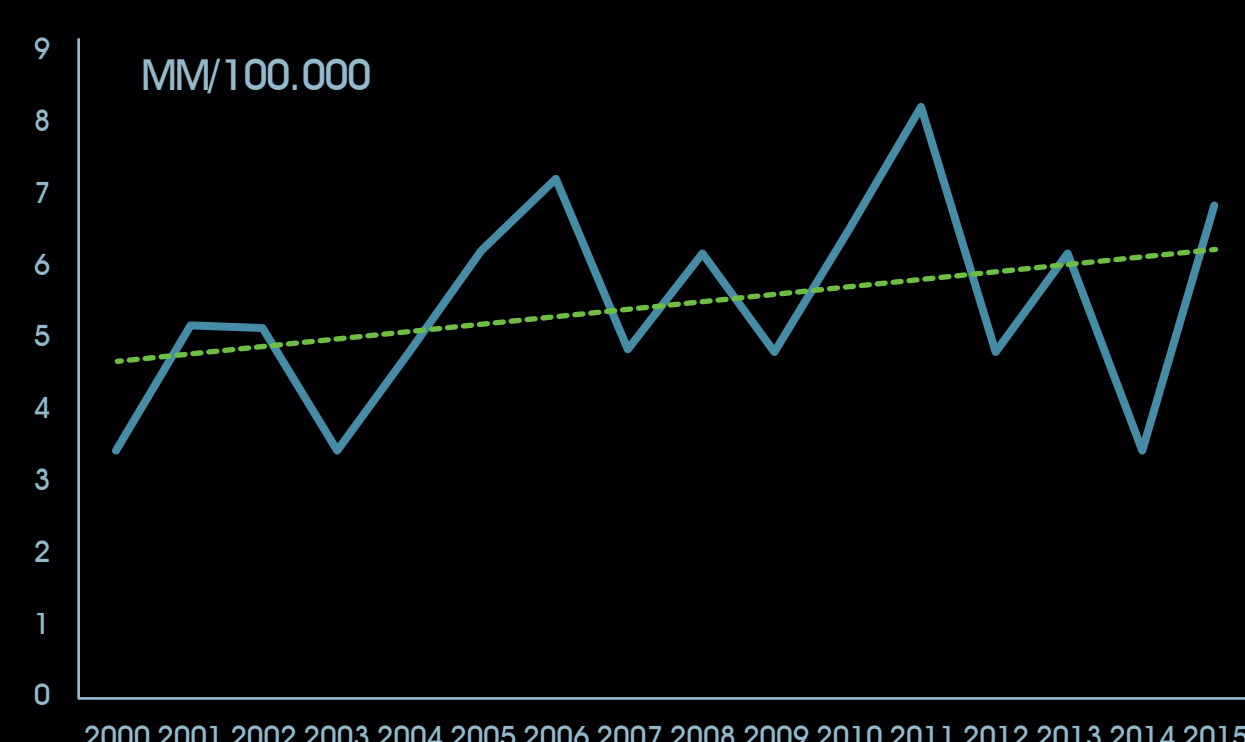


Figure 1: Incidence of malignant mesothelioma in men in Northern Jutland 2000-2015

OBJECTIVES

To characterize males diagnosed with MM with regard to clinicopathological characteristics and source of asbestos exposure.

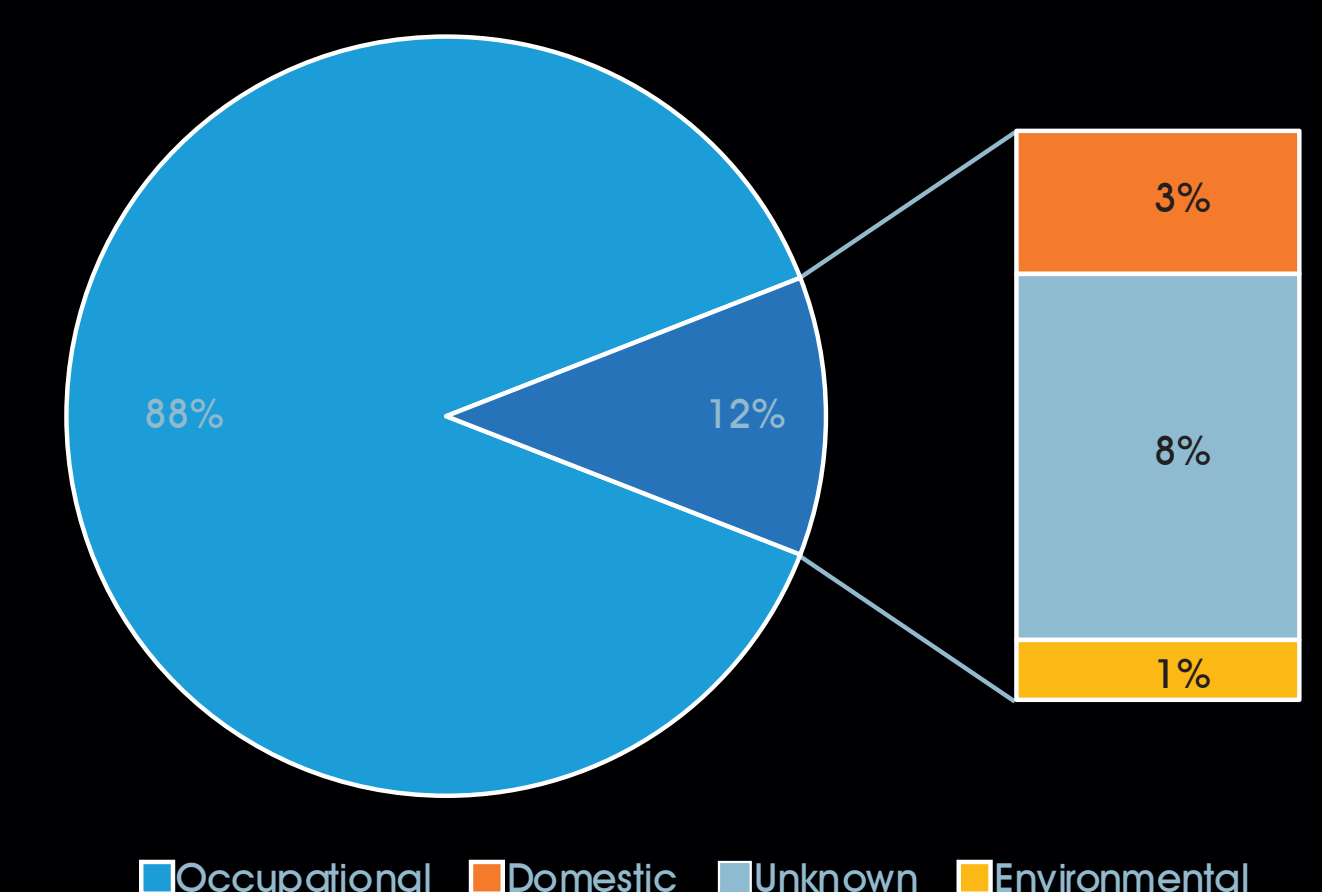


Figure 2: Source of asbestos exposure

MATERIALS AND METHODS

Males diagnosed with MM between 2000 and 2015 were identified from the Dept. of Pathology Aalborg University Hospital. Information regarding disease location, method of diagnosis, TNM-stage, WHO performance status (PS), source of asbestos exposure, comorbidities, treatment and survival was retrieved from health records. Men with high-risk asbestos exposure occupations were categorized as having occupational asbestos exposure. Data analysis was performed using Microsoft Excel.

RESULTS

Two hundred thirty-seven males diagnosed with MM were identified. MM incidence is still increasing (figure 1). Pleural disease (PM) accounted for 228/237 (96%) of cases. Occupational asbestos exposure was identified in 201/237 (88%) of the patients (figure 2). Overall median survival was 12 months. In our population 65/237 (27%) were untreated with a median survival of 3 months. The incidence of cardiopulmonary comorbidity increased with older age. Patients with comorbidity and PS 0-2 were less likely to receive chemotherapy than those with no comorbidity but comparable PS. ($p < 0.001$). Pleural fluid cytology was diagnostic in 131/207 (63%) of the patients where a diagnosis of MM was verified by subsequent biopsy.

CONCLUSIONS

The population has a high and increasing incidence of MM. MM is mainly related to occupational asbestos exposure in men. Diagnostic yield of pleural fluid cytology is high. The rationale for withholding chemotherapy in PS 0-2 patients with cardiopulmonary comorbidity and how age influences the decision not to treat deserves further research along with the high incidence and diagnosis by cytology.

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